

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. (Currently Amended) An implantation system comprising:
an implant having an exterior contoured threaded surface portion, said exterior threaded contoured surface portion defining a plurality of channels;
a driver, at least partially disposed within said channels, having a cutting portion and a driving portion, wherein the cutting portion is configured to form an implant engaging surface within a work material, and the driving portion is configured to drive the contoured threaded portion into engagement with the implant engaging surface; and
a fastener operable to be disposed within the channels and configured to be fixed to the implant, and further being configured to fixably engage soft tissue graft material and, wherein at least one of the implant or the fastener defines a graft engaging surface comprising a graft engaging member configured to engage the graft.
2. (Original) The system of claim 1 wherein the implant is a bone screw.
3. (Cancelled)
4. (Original) The system of claim 1 wherein the implant further comprises a generally cylindrical body, the body including a first end defining a top surface, a

second end, a threaded outer surface and at least one channel, the channel extending from the top surface to the second end.

5. (Original) The system of claim 4 wherein the cutting portion includes a plurality of thread forming portions linearly spaced along the cutting portion, the cutting portion positioned within the channel such that the implant can be threaded into an aperture formed within the work material as the cutting portion forms an internal threaded surface within the aperture.

6. (Original) The system of claim 1 wherein the work material is a bone.

7. (Original) The system of claim 1 wherein the implant is resorbable.

8. (Previously Presented) The system of claim 1 wherein the implant defines a pair of opposed channels.

9. (Currently Amended) An implantation system comprising:
an implant having an exterior ~~contoured portion~~ threaded surface which defines a longitudinal channel;
a driver having a cutting portion and a driving portion, wherein the cutting portion is configured to form an implant engaging surface within a work material, and the driving portion is configured to drive the ~~contoured portion~~ threaded surface into engagement

with the implant engaging surface, wherein the implant defines an anchor locking surface; and

a staple at least partially disposed within the longitudinal channel having an upward locking surface, the upward locking surface configured to engage with the anchor locking surface.

10. (Original) The system of claim 9 further comprising a graft interposed between the staple and the implant.

11. (Currently Amended) The system of claim 9 ~~further comprising a slot formed within wherein the implant engaging surface defines an aperture and an adjacent slot,~~ and wherein the staple is at least partially located within the slot, thereby inhibiting rotation of the implant relative the working surface.

12. (Original) The system of claim 11 wherein the slot is formed by translating the driver in a direction that is parallel to the axis of the implant.

13. (Withdrawn) The system of claim 9 wherein the staple further comprises a graft pin, the implant further comprises a graft aperture and the graft pin is configured to be inserted within the graft aperture.

14. (Withdrawn) The system of claim 9 wherein the implant further comprises a graft pin, the staple further comprises a graft aperture and the graft pin is configured to be inserted within the graft aperture.

15. (Withdrawn) The system of claim 9 further comprising a suture aperture within the staple.

16. (Currently Amended) A bone attachment apparatus comprising:
an implant having a generally cylindrical body, the implant including a first end defining a top surface, a second end, a threaded outer surface defining an arcuate groove and further defining a pair of longitudinal staple accepting channels; and
a staple having a locking surface, the locking surface configured to engage with a surface of the staple accepting channels wherein said staple and said implant define a soft tissue accepting aperture therebetween, wherein the staple interrupts the arcuate groove so as to prevent rotation of the implant.

17. (Original) The apparatus of claim 16 wherein the staple includes a graft holding surface.

18. (Original) The apparatus of claim 16 wherein the implant includes a graft holding face.

19. (Previously Presented) The apparatus of claim 16 wherein the implant is adapted to be coupled within an aperture defined by a bone, the aperture including a slot extending to an exterior surface of the bone, wherein the staple is at least partially located within the slot, thereby inhibiting rotation of the implant relative the bone.

20. (Currently Amended) A method of connecting an implant to a bone comprising:

forming an implant engaging surface within a bone aperture by rotating a driver within the bone aperture;

driving the implant into the bone aperture, wherein a contoured threaded surface defining an arcuate groove of the implant engages the implant engaging surface; and

inserting a staple into a slot longitudinal channel defined within the contoured threaded surface, whereby the staple bindingly engages both the implant and a surface defining the bone aperture, said staple further intersecting the groove so as to prevent rotation of the implant.

21. (Original) The method of claim 20 further comprising forming the slot within the bone aperture.

22. (Cancelled)

23. (Previously Presented) The method of claim 20 wherein driving the implant into the bone aperture and rotating the driver are performed simultaneously.

24. (Original) The method of claim 20 wherein forming the implant engaging surface includes rotating the implant within the bone aperture.

25. (Original) The method of claim 20 further comprising forming the slot by translating a driver in a direction that is parallel to the axis of the bone aperture.

26. (Original) The method of claim 20 wherein driving the implant into the bone aperture forms the slot.

27. (Original) The method of claim 20 wherein driving the implant into the bone aperture includes linearly translating the implant.

28. (Original) The method of claim 20 further comprising inserting the staple into a channel formed within the implant.

29. (Original) The method of claim 28 wherein inserting the staple into the slot and inserting the staple into the channel are performed simultaneously.

30. (Original) The method of claim 20 wherein driving the implant includes threading a resorbable bone screw into the bone aperture.

31. (Original) The method of claim 20 wherein driving the implant includes linearly driving a resorbable bone screw into the bone aperture.

32. (Currently Amended) A method of connecting an implant to a bone comprising:

forming an implant engaging surface within a bone aperture;

driving the implant into the bone aperture, wherein ~~a contoured~~ an exterior threaded surface defining an arcuate groove of the implant engages the implant engaging surface;

inserting a staple into a slot defined in the ~~contoured~~ threaded surface, whereby the staple bindingly intersects the groove and engages both the implant and the bone aperture so as to resist rotation of the implant; and

interposing a graft between the implant and a surface defining the staple.

33. (Original) The method of claim 32 wherein interposing the graft between the implant and the staple includes engaging the graft with a graft holding surface of the staple.

34. (Original) The method of claim 32 wherein interposing the graft between the implant and the staple includes engaging the graft with a graft holding face of the implant.

35. (Previously Presented) The method of claim 32 wherein inserting the staple into the slot includes engaging an anchor locking surface with a staple locking surface wherein the anchor locking surface defines at least a portion of a channel formed within the implant.

36. (Currently Amended) A method of driving an implant comprising:
forming an aperture within a bone;
defining a cutting surface accepting channel and a thread defining an arcuate groove in an exterior surface of the implant;
coupling the implant to a driver so as to position the cutting surface within the channel;
driving the implant into the aperture;
forming an implant engaging surface within the aperture; and
disposing a fastener within the channel so as to interrupt the arcuate groove and prevent rotation of the implant with respect to the aperture; and
coupling soft tissue to the implant fastener.

37. (Original) The method of Claim 36, wherein driving the implant and forming the aperture are performed simultaneously.

38. (Original) The method of Claim 36, wherein driving the implant includes linearly translating the implant.

39. (Withdrawn) The method of Claim 38, wherein driving the implant includes impacting the driver.

40. (Original) The method of Claim 36, wherein driving the implant and forming the implant engaging surface are performed simultaneously.

41. (Original) The method of Claim 36, wherein forming the implant engaging surface includes forming a threaded surface.

42. (Original) The method of Claim 36, wherein driving the implant includes rotating the driver.

43. (Original) The method of Claim 36, wherein forming the implant engaging surface includes forming the implant engaging surface with the implant.

44. (Previously Presented) The method of Claim 36, wherein forming the implant engaging surface includes forming the implant engaging surface with the driver.